

REMARKS/ARGUMENTS

In the office action dated April 11, 2007, claims 1 - 21 were rejected as anticipated by Qin, U.S. Patent Publication 2005/0283072. Reconsideration in view of the following remarks is respectfully requested.

As recited in claim 1, the present invention provides a method for characterizing an elasticity property of a viscous medium. The method comprises directing an ultrasound wave in the viscous medium to produce a vibrational force on the medium, determining a vibrational velocity of the medium as a function of the frequency of vibration, and repeating steps these steps for a plurality of frequencies to develop a resonance spectrum of the medium. Subsequently, a resonant frequency of the viscous medium is determined, and the elasticity property is determined as a function of the resonant frequency.

Qin discloses a method for calculating bone mineral density and material strength/stiffness from ultrasound array data. The Examiner points to paragraphs 12, 51, 68, and 69 as disclosing resonant frequency. Paragraph 12 discloses comparing a bone velocity to a spectrum of velocities for the patient's age. Paragraph 51 discloses identifying a region of interest where the data for the points in the ROI indicates that a bone property is outside normal parameters. Paragraphs 68 and 69 discuss the use of mathematical equations that relate ultrasound velocity and attenuation to bone quality parameters.

None of the cited paragraphs discloses or suggests developing a resonance spectrum of the medium, or identifying a resonant frequency. None of the cited paragraphs disclose resonance. In fact, the term resonance is not used in the specification at all. As none of the cited paragraphs disclose or suggest resonance, it is not clear how these paragraphs can disclose determining a material elasticity property as a function of the resonant frequency. If the rejection is maintained, therefore, the Applicants respectfully request clarification as to how and why the cited paragraphs disclose resonance.

As the cited reference fails to disclose all of the elements of claim 1, the reference cannot anticipate claim 1, and the Applicants respectfully request that the rejection be withdrawn. Independent claims 10 and 14 also recite a resonant frequency, and are believed to be patentable over Qin for the same reason as claim 1. Therefore, the Applicants respectfully request that the rejection of claims 1 - 21 in view of Qin be withdrawn.

Conclusion

In view of the foregoing remarks, the Applicants submit that claims 1 - 21 are in condition for allowance, and respectfully request that a notice of allowance fore these claims be issued.

The Commissioner is authorized to charge any fees under 37 CFR § 1.17 that may be due on this application to Deposit Account 17-0055. The Commissioner is also authorized to treat this amendment and any future reply in this matter requiring a petition for an extension of time as incorporating a petition for extension of time for the appropriate length of time as provided by 37 CFR § 136(a)(3).

Respectfully submitted,

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